

WHAT IS CLAIMED IS:

- 1 1. An apparatus for applying a thermal conductive  
2 medium to an inside portion of a sheath, the apparatus  
3 comprising:  
4 a tubular applicator tip including a nozzle  
5 positioned in a sidewall of the tubular applicator tip;  
6 a pump having an input adapted for coupling to  
7 a source of thermal conductive medium and an output  
8 coupled to said tubular applicator tip; and  
9 a control module for controlling the pump and  
10 thereby the amount of thermal conductive medium applied to  
11 said sheath by the tubular applicator tip.
- 1 2. The apparatus of claim 1, wherein the tubular  
2 applicator tip has a closed tip end preventing expulsion  
3 of thermal conductive medium from the tip in the axial  
4 direction of said tip.
- 1 3. The apparatus of claim 2, further comprising:  
2 a contact switch coupled to the control  
3 circuit, the contact switch being positioned to come into  
4 contact with the sheath when the sheath is properly  
5 positioned over the tubular applicator tip.
- 1 4. The apparatus of claim 3, further comprising:  
2 an applicator shaft for coupling the tubular  
3 applicator tip to the pump output.

1        5.    The apparatus of claim 4,  
2                wherein the nozzle has a diameter in the range  
3        extending from and including 0.14" to and including  
4        0.145"; and  
5                wherein the applicator shaft includes a bleeder  
6        hole having a diameter one third or less the diameter of  
7        said nozzle.

1        6.    The apparatus of claim 3, further comprising:  
2                a motor, for rotating said shaft, coupled to  
3        said applicator shaft and to said control module.

1        7.    The apparatus of claim 6, wherein the control module  
2        includes:  
3                a timing circuit for activating said pump in  
4        response to activation of said contact switch and for  
5        activating said motor following activation of said pump.

1        8.    The apparatus of claim 7, wherein the timing circuit  
2        includes:  
3                means for deactivating said pump after a set  
4        period of time; and  
5                deactivating said motor after deactivation of  
6        said pump.

1        9.    The apparatus of claim 2, wherein said tubular  
2        applicator tip includes:  
3                an open shaft end attached to said applicator  
4        shaft; and

5           a plurality of nozzles located along a line  
6       extending in the axial direction between said closed tip  
7       end and said open end.

1       10. The apparatus of claim 9 wherein the tubular  
2       applicator tip further comprises:

3           a mushroom shaped cap portion at the closed tip  
4       end; and

5           wherein each of said plurality of nozzles is a  
6       hole in the sidewall of said tubular applicator tip.

1       11. A system for applying a thermal conductive medium to  
2       a portion of the interior of a sheath, the system  
3       comprising:

4           a thermal conductive medium storage device;

5           a pump coupled to the thermal conductive medium  
6       storage device;

7           a thermal conductive medium applicator tip  
8       coupled to said pump and including at least one hole  
9       through which thermal conductive medium can be expelled  
10      when pumped through the applicator tip by said pump; and

11           a switch coupled to said pump, for controlling  
12      activation of said pump.

1       12. The system of claim 11, further comprising:

2           a hollow applicator shaft for mounting said  
3       thermal conductive medium applicator tip, the hollow  
4       applicator shaft coupling said thermal conductive medium  
5       applicator tip to the pump; and

6           a motor connected to said hollow applicator  
7   shaft for causing said applicator shaft to rotate.

1   13. The system of claim 12, wherein said thermal  
2   conductive medium applicator tip is tubular in shape  
3   having a closed tip end, an open shaft end and a sidewall  
4   extending from the closed tip end to the open shaft end,  
5   said hole being located in the sidewall.

1   14. The system of claim 13, further comprising:  
2           a control circuit for coupling said switch to  
3   said pump and said motor, the control circuit including  
4   means for activating said pump in response to activation  
5   of said switch.

1   15. The system of claim 11, wherein said switch is a  
2   contact switch, the switch being positioned to come into  
3   contact with the sheath when the sheath is positioned  
4   over said thermal conductive medium applicator tip.

1   16. A method of applying a thermal conductive medium to  
2   an interior portion of a sheath, the method comprising:  
3           positioning a sheath over a thermal conductive  
4   medium applicator tip;  
5           starting the pumping of the thermal conductive  
6   medium;  
7           rotating the applicator tip; and  
8           stopping the pumping of the thermal conductive  
9   medium after a first set period of time.

1 17. The method of claim 16, further comprising:  
2 stopping the rotation of the applicator tip  
3 after a second set period of time passes, the second  
4 period of time starting from the point in time at which  
5 the pumping is stopped.

1 18. The method of claim 17, wherein the applicator tip  
2 is attached to a source of thermal conductive medium by  
3 an applicator shaft, the method further comprising:  
4 purging the applicator shaft of thermal  
5 conductive medium after the rotation of the applicator  
6 tip is stopped.

1 19. The method of claim 18, further comprising:  
2 following stopping the rotation but prior to  
3 purging, removing the sheath so that it is no longer  
4 positioned over the applicator tip.

1 20. The method of claim 16, further comprising:  
2 sensing when said sheath is positioned over a  
3 thermal conductive medium applicator tip; and  
4 wherein said step of starting the pumping is  
5 performed in response to sensing that said sheath is  
6 positioned over the thermal conductive medium applicator  
7 tip.

1 21. The method of claim 17, wherein stopping the pumping  
2 of the thermal conductive medium after a first set period  
3 of time includes:

4           operating the control circuit to stop the  
5   supply of power to a pump; and  
6           wherein stopping the rotation of the applicator  
7   tip includes:

8           operating the control circuit to stop the  
9   supply of power to a motor used to rotate the  
10   applicator tip.

1   22. The method of claim 19, wherein the first set period  
2   of time is long enough to pump sufficient thermal  
3   conductive medium to produce a coating on said interior  
4   portion of the sheath having a thickness, T, in the range  
5   of .002"  $\leq T \leq$  .004".